

CLAIMS

1. A method for registering a mobile unit with a communication system including a serving system, a home
5 IP Multimedia Subsystem (IMS), a mobile switching center (MSC), and an interworking MSC (iMSC), the iMSC including at least one Media Gateway (MGW) that is controlled by the iMSC, the method comprising:
- 10 performing a location update procedure by the mobile unit;
 - processing by the serving system the registration by authenticating the mobile unit and informing the Home Subscriber Server (HSS) of the location of the current serving system;
 - 15 determining if the serving system can process the mobile unit as an iMSC; and
 - if the serving system can process the mobile unit as an iMSC:
 - 20 performing SIP registration procedures by the iMSC with the home IMS on behalf of the mobile unit;
 - delivering phone calls destined for the mobile unit to the serving system;
 - utilizing a Domain Name System (DNS) by the iMSC to determine if there is an I-CSCF address
 - 25 associated with the mobile unit;
 - sending a SIP registration message to the I-CSCF in the home IMS on behalf of the mobile unit;
 - communicating by the I-CSCF with the HSS to complete the IMS registration procedure; and
 - 30 sending subscriber profile information to a Serving Call State Control Function (S-CSCF).

0949675-073403
FILED

2. A method for registering a mobile unit in accordance with claim 1, wherein the subscriber profile information includes information about features and services provisioned for the mobile unit.

5

3. A method for registering a mobile unit in accordance with claim 2, wherein the S-CSCF provides all features and services for registered mobile units.

10 4. A method for registering a mobile unit in accordance with claim 3, wherein the S-CSCF provides all features and services for registered mobile units directly.

15 5. A method for registering a mobile unit in accordance with claim 3, wherein the S-CSCF provides all features and services for registered mobile units indirectly.

20 6. A method for registering a mobile unit in accordance with claim 5, wherein the S-CSCF provides all features and services for registered mobile units indirectly comprises sending SIP signaling by the S-CSCF to an application server located in the communication system.

25 7. A method of registering a mobile unit in accordance with claim 1, wherein the subscriber profile information includes information about supplementary services provisioned for the mobile unit.

30 8. A method of registering a mobile unit in accordance with claim 7, wherein the mobile unit can query for status information about supplementary services provisioned for the mobile unit.

05919675.073404

9. A method of registering a mobile unit in accordance with claim 8, wherein the step of querying for status information comprises interworking standard air interface procedures with SIP.

5

10. A method of registering a mobile unit in accordance with claim 7, wherein the mobile unit can control the behavior of supplementary services provisioned for the mobile unit.

10

11. A method of registering a mobile unit in accordance with claim 10, wherein the step of controlling the behavior of supplementary services comprises interworking standard air interface procedures with SIP.

09467030

12. A communication system comprising:
a circuit-switched (CS) domain;
an IP Multimedia Subsystem (IMS); and
an interworking Mobile Switching Center (iMSC) that
5 translates CS domain commands to Session Initiation
Protocol (SIP) procedures and performs interworking
between supplemental services invocations.

0994672-0740

ication system in accordance with claim 12,
MSC performs interworking between
services query procedures.

ication system in accordance with claim 12,
MSC performs interworking between
services control procedures.